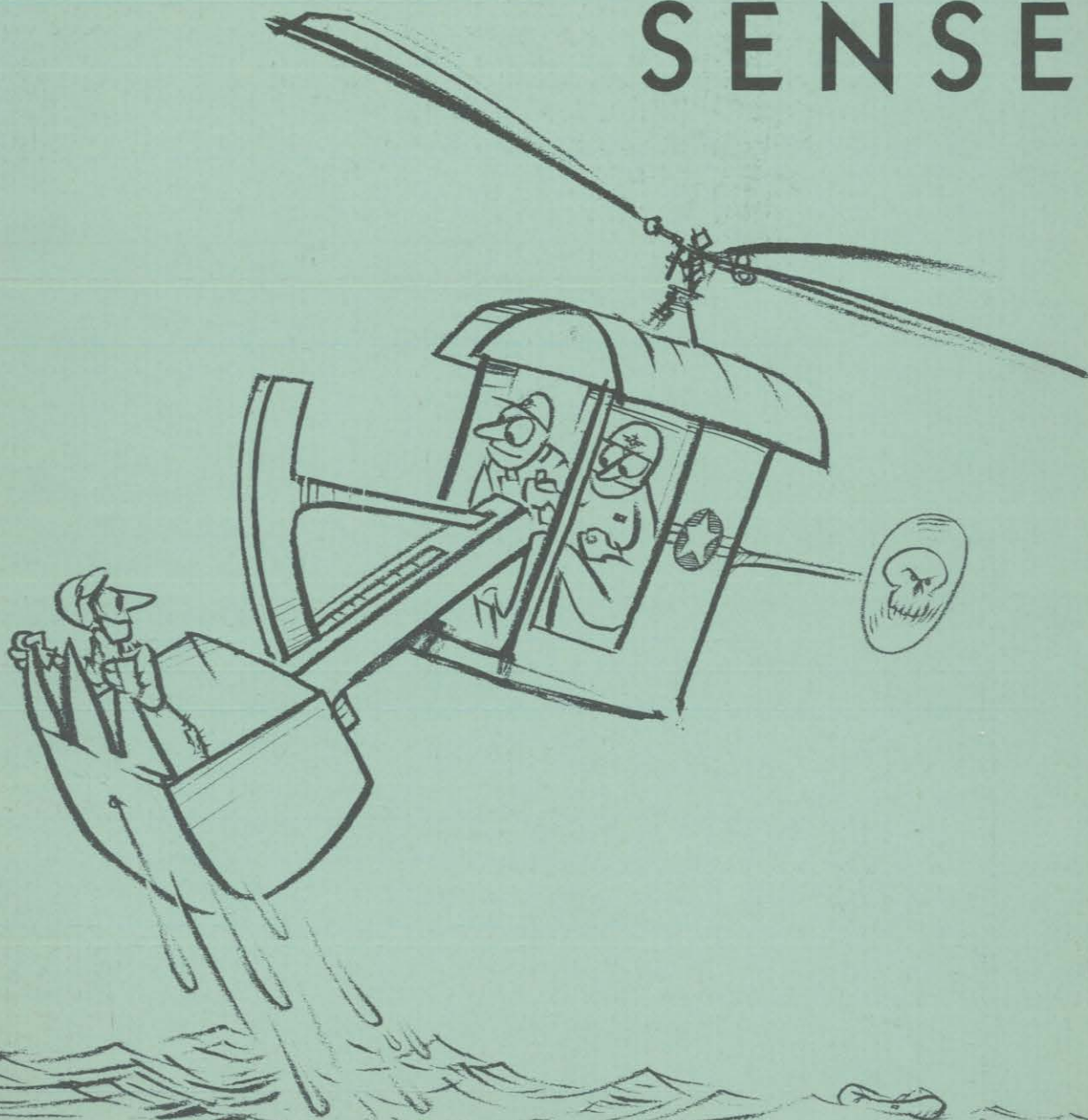


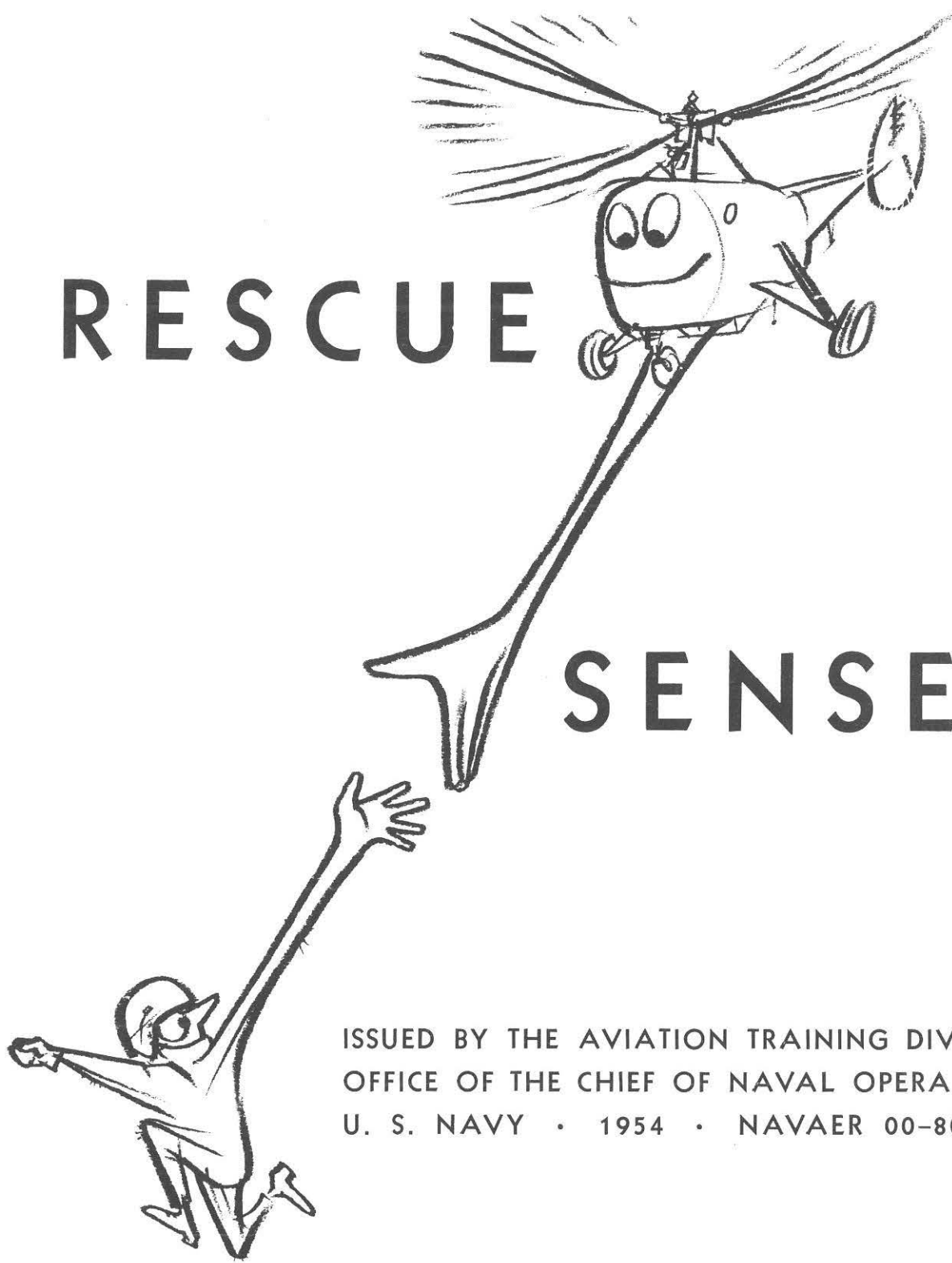
HELICOPTER RESCUE SENSE



HELICOPTER

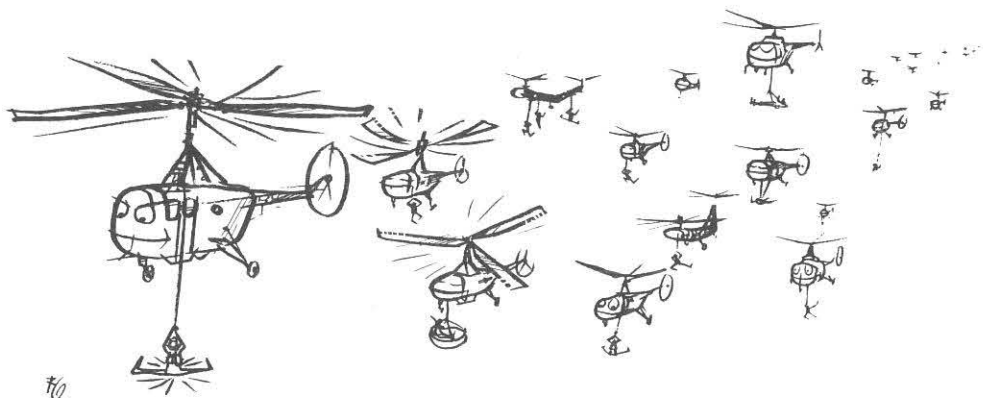
RESCUE

SENSE



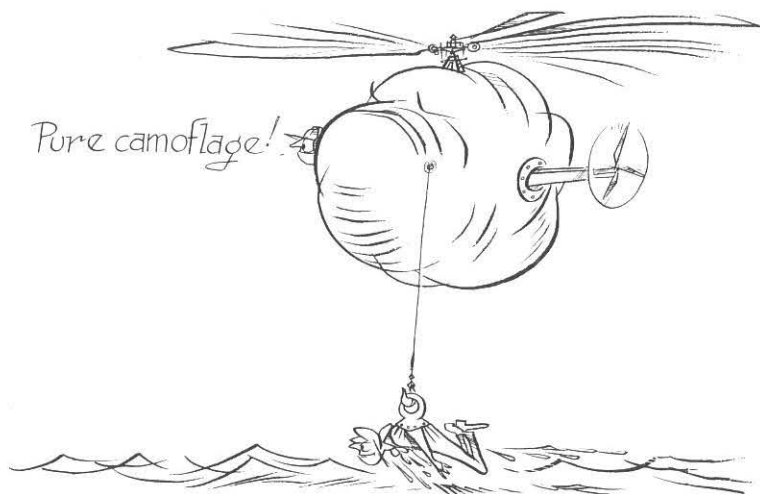
ISSUED BY THE AVIATION TRAINING DIVISION
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
U. S. NAVY • 1954 • NAVAER 00-80Q-42

HELICOPTER RESCUE SENSE



ONE ESTIMATE puts the number of lives saved by helicopters in the Korean fighting at more than 7,000. Some of these rescues have been routine, some exciting; some of them have been accomplished in a matter of minutes and others have taken days of thought and planning. But, for the helicopter rescue pilots, business—the life-saving business—has been good. The stump jumpers have been hard at work.

Like all people who want to do their jobs well, the helicopter people are not satisfied. That is why they are forever experimenting with new rescue techniques, dreaming up different equipment, and brooding about the fellows likely to require help. Helicopter pilots



and their crewmen are in a very good position to observe the very thin margin that sometimes separates the saved and the unsaved.

Too many lives have been needlessly lost because the man in trouble does not know how to help save himself. He does not

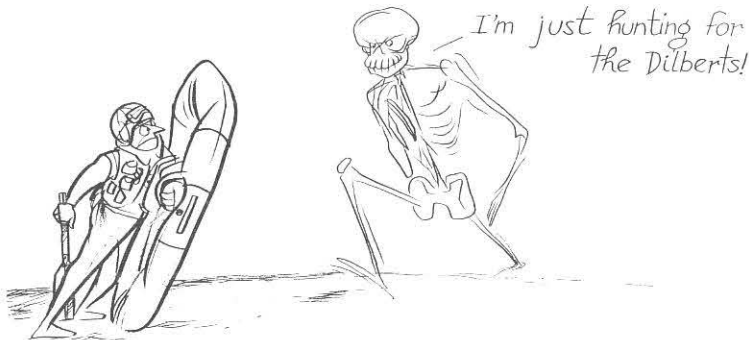


understand how to attract attention. He throws away useful equipment. He does not take proper care of himself. He does not know enough about the limitations of helicopters to put himself in the best position for rescue.

All this is particularly true of the fellow down there alone, with nothing between him and big trouble but pararaft and survival kit. Survivors in groups can spell one another, figure out the smartest

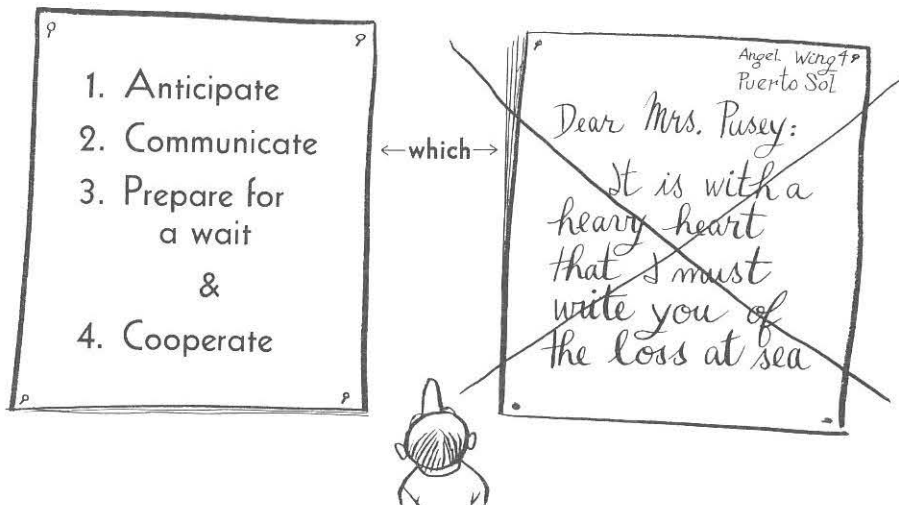


ways to proceed, and generally help out. But the solitary soul, strictly on his own, is more likely to make the kind of mistake that will keep him from getting home in one piece.



If every pilot likely to run into some kind of emergency (*every* pilot, that is) would devote a few minutes a week to meditating on four simple principles, we'd have more and easier rescues and fewer sad letters to the folks back home. Here they are:

1. *Anticipate*
2. *Communicate*
3. *Prepare for a wait and*
4. *Cooperate.*

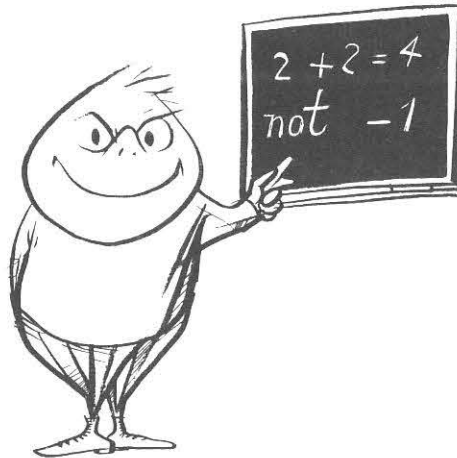


Whether a man goes down at sea or ashore, he has a better chance of surviving if he knows what is involved in those four easy rules.

THE FORWARD LOOKER



In survival and rescue, the percentage always favors the man who has figured out some of the answers beforehand. This is what the rescue people mean by *anticipate*. And, like most figuring, it begins with a session on the books.

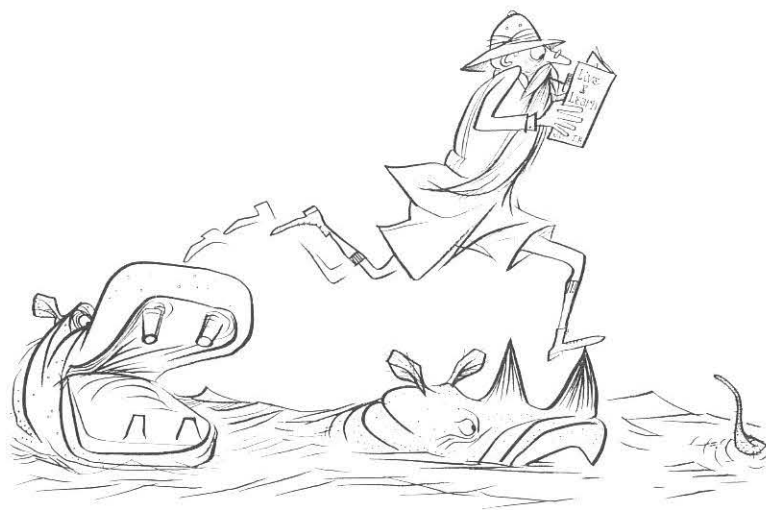


The first item is to survive the crash, bail-out, or ditching. *Dunking Sense*, NAVAER 00-80Q-2, with the word on what to do all the way from before a ditching through a voyage aboard a raft, is recommended anticipation reading to prepare you for emergencies at sea. Another book with good information about staying alive on sea, land, and sea ice is Air Force Manual 64-5, *Survival*. A few copies of this are available from your aeronautical publication supply point. Fuller treatment is found in the Naval Aviation Physical Training Manual, *How to Survive on Land and Sea*, NAVAER 00-80S-56, a particularly good book on the problem of obtaining food at sea or ashore. The squadron survival officer should make these available. Another useful little number is NAVAER 00-80ZZ-42 (Revised 1953), *First Aid for Air Crews*. Printed on waterproof paper and small enough to be tucked into a shirt pocket, this handy folder may also be kept in the First Aid Kit.

A thoughtful look at these publications will show you what some of the problems of staying alive are and will help you prepare for them.



Another part of anticipation is knowing the survival gear you'll be carrying around with you. The people in BuAer, most of them old hands at the business of staying alive through aviation emergencies, have included in the PK pararaft kit as many helpful items as



you can conveniently carry around. Break down the kit and have a look at what is there. Learn how you can use it.

While all this may have very little to do with being hauled out of trouble by a helicopter, it can be pretty good insurance that you'll be on hand, ready and willing for rescue, when the whirlybird pilot



wheels over the horizon. Have you been through your bail-out routine lately? It's still a good idea to have a set pattern in your mind



about when to inflate your life jacket, for example, because once you've done it you may not be able to slip out of your parachute harness. The trick is to release your harness before inflating the vest.

As will be shown later, the added weight of the 'chute and harness may be critical in terms of helicopter rescue, not to mention your own ability to swim freely in the water.

The Mark 3 and 4 anti-exposure suits, good as they are, have added a few more complications to ditching. A man with his 'chute leg straps firmly fastened is likely to forget that a fair amount of air can be trapped inside the suit. Recently a Corsair pilot, leg straps still tight and air trapped inside the suit, entered the water after a ditching and found himself floating like a high-diver who can't recover from a jackknife—head under and rear end riding high. He

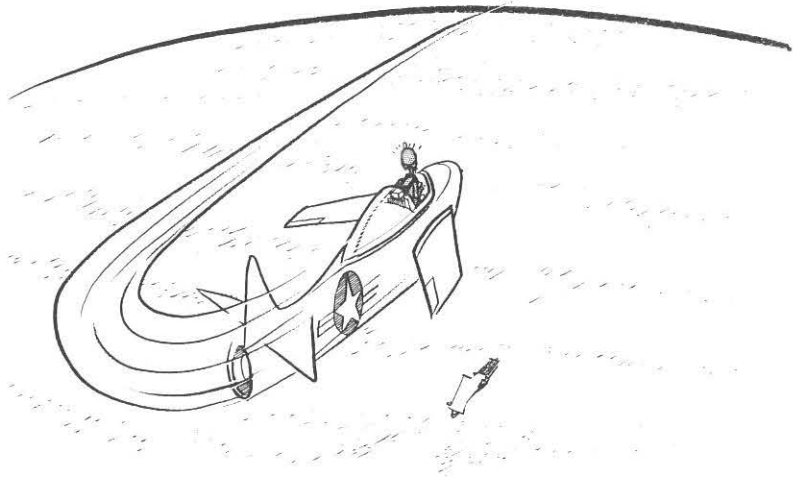


had to paddle like mad to keep his head up and consequently could not use his hands to loosen the leg straps. Fortunately, a helicopter was on the spot. After much furious swimming, the ditcher was able to get an arm through the sling, although halfway out of the water he lost his grip and fell back in. The second pickup was successful but the poor fellow was almost done for. All this happened in less than 5 minutes. It didn't help matters either that the rescued man was being pulled aboard the helicopter with the added weight of parachute and pararaft.

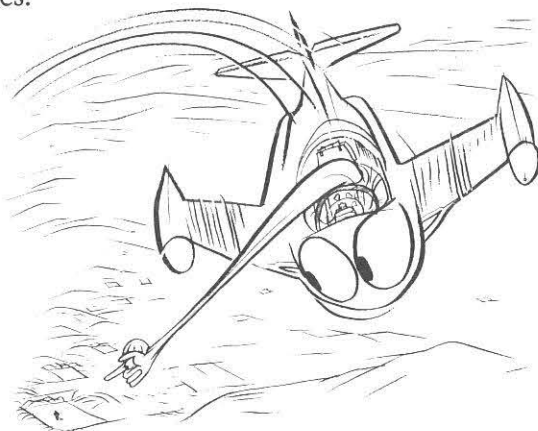
A current recommendation, therefore, is that a man wearing one of the buoyant anti-exposure suits ought to squeeze all the air possible out of the pants before fastening the straps of his harness. That's a fair way to guarantee being able to keep your head above water.



You must also anticipate making the quick change from wingman to RESCAP pilot. Do you know how to keep a downed man in sight? Nothing is easier in a modern, high-speed jet than to miss practically any object down below. By the time you've turned around, your buddy is gone. And this can happen on land as well

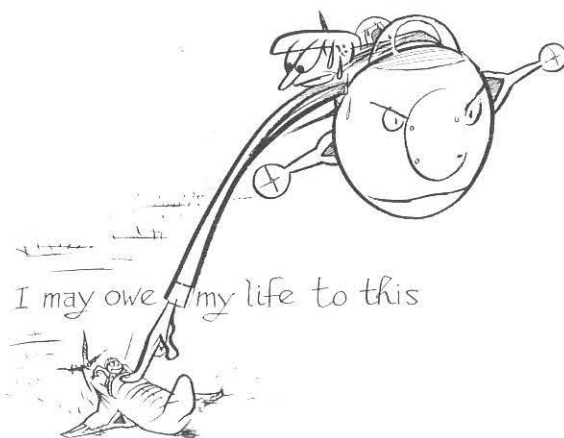


as over the water, where the problem of spotting a downed man is ordinarily so much more difficult. That is why some squadrons in Korea made a specific effort to train their pilots to keep people on the ground under close observation. They practiced on farmers working in the fields or with their own people posted down there in training exercises.



First emphasis is always placed on sighting the downed pilot immediately and *not looking away until he has been accurately located with reference to landmarks.*

Are you ready for RESCAP flying? You ought to be. As one action report put it: "When an aviator has bailed out over enemy territory, his immediate rescue is, for the most part, dependent upon the actions of members of his flight." In other words, a rescue that



may eventually be completed by a helicopter, depends for its success on how good the immediate RESCAP may be.

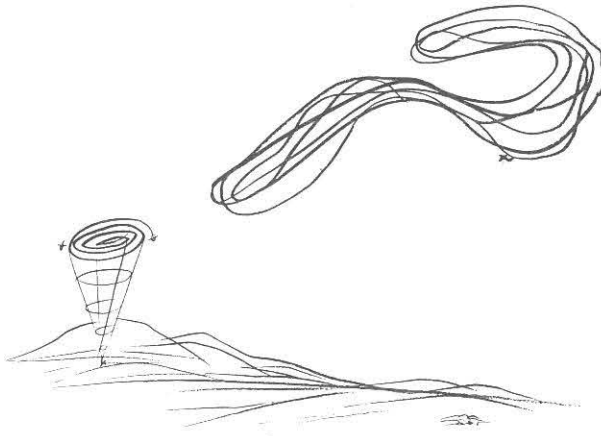
Anticipate this too: when you see one of your squadron mates go down, your first impulse will be to protect him, no matter what the cost to yourself. That's a good impulse but it must not lead to foolishness. "Eagerness to save a buddy," says the same report, "must not result in fuel exhaustion by other planes." You won't be doing anybody a favor by making several rescues grow where there was only one before. One rescue at a time, please. Help out while you can



and for as long as you can, but make sure you have enough fuel to get home. After all, it's just conceivable that the added bit of information you bring back with you may be the item that will make your friend's ultimate rescue possible.

While you're up there, keep your wits about you. In Korea, our side was up against a ruthless and unscrupulous foe and sometimes—entirely without meaning to—our people played right into their hands. Pilots, flying over a downed countryman and anxious to keep him in sight, came close to delivering him to the enemy by personally serving as markers in the sky behind enemy lines. Making the man the center of the orbit, the RESCAP pilot would fly such a regular pattern around the survivor that it was no trouble at all for him to be located and captured. In the later stages, when we were smartened

by experience, RESCAP pilots flew a more eccentric orbit—trying, difficult as it was, to keep the man's position and predicament under observation but without pinpointing him for enemy troops lurking in



the area. Besides, regular orbiting at low altitude is asking for that lucky shot from the ground that may cause you to join your friend down there on the deck. Don't get too low or too slow.



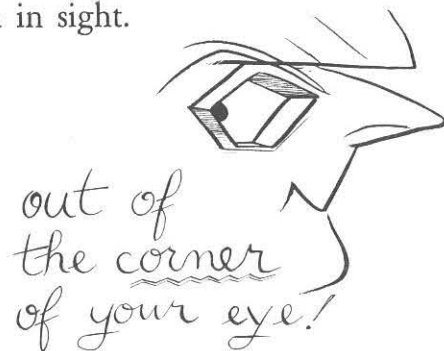
So the RESCAP pilot anticipates all manner of trickery from the opposition. In Korea, there were occasions when the foe deliberately lured our people into attempted rescues by rigging a dead body to look like one of our injured pilots beside a wrecked plane. The call would go in for helicopter assistance, with the result that the whirly pilot and his crewman were killed or captured. Helicopter people

are always willing to risk their necks for the sake of a downed man, but they also prefer—like the rest of us—to expose their necks for a good reason. Therefore, it is part of a RESCAP pilot's duty to try to find out the condition of the man on the ground. If the enemy is decoying us with a rigged body, that fact should be known. And there are other tricks. The Air Intelligence Officer can tell you plenty.

Double anticipation, then. You'll want to try to prepare for emergencies that may happen to you and to get ready to be of the most help when they happen to the other fellow. Nobody can make up a sound set of rules as he goes along. The worst always happens too fast. Sit down now and figure out the possibilities. Learn the RESCAP procedure for your area thoroughly. Practice sighting objects on land or on the surface of the sea. Remember that the helicopter pilots are too limited in range to do much effective searching. If they are going to reach a downed man, it will be because you have told them where he is.



You will have kept him in sight.

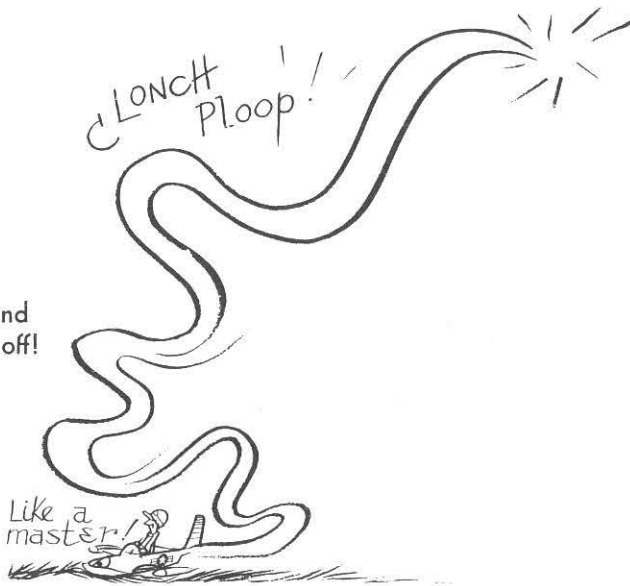


TELLING THE WORLD

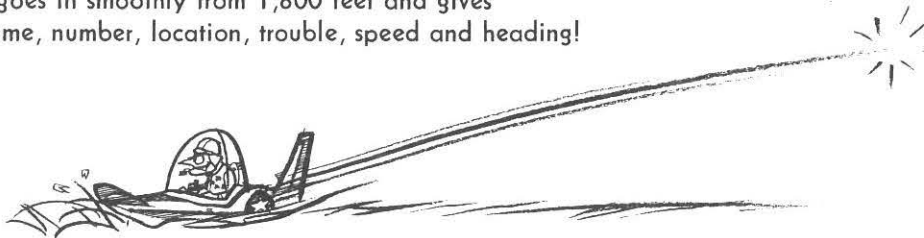
Whether you ditch, bail out, or crash-land, your situation will be less precarious if somebody knows where you are when the emergency occurs. Obviously, how much you can manage to transmit about your predicament depends on how much warning you have. It may depend too on how accurate a check you've been keeping on your own navigation. Whenever possible, try to get the word through about

1. who you are
2. where you are
3. what the situation is
4. where you're heading and how fast.

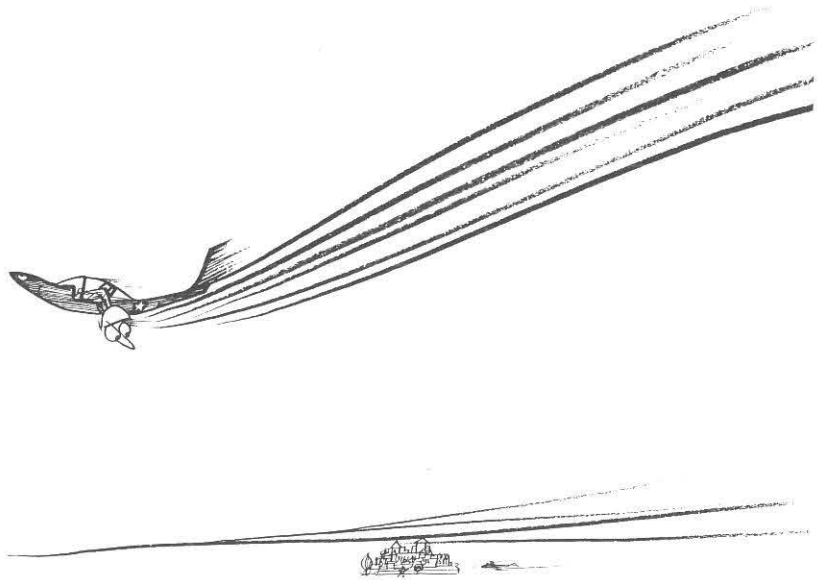
Dil flounces in from 13,000 and
still hasn't gotten the word off!



Joe goes in smoothly from 1,800 feet and gives
name, number, location, trouble, speed and heading!



Helicopters being what they are, only the prop and jet lads (what the whirly pilots call the "fixed wing people") will do any searching

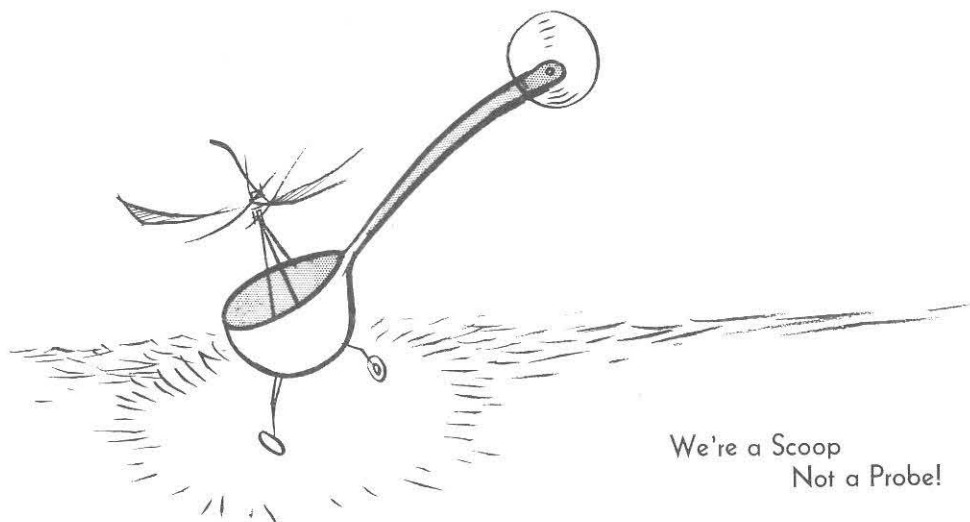


for survivors in enemy territory. A helicopter, relatively slow and limited in range, is a hovering duck for small-arms and AA fire from



the deck; so except for very unusual circumstances, the whirly bird is supposed to start out on its rescue mission with a specific objective.

The pilot must know where he's going, whether he has much chance of getting to the downed man, and of course whether he can make it

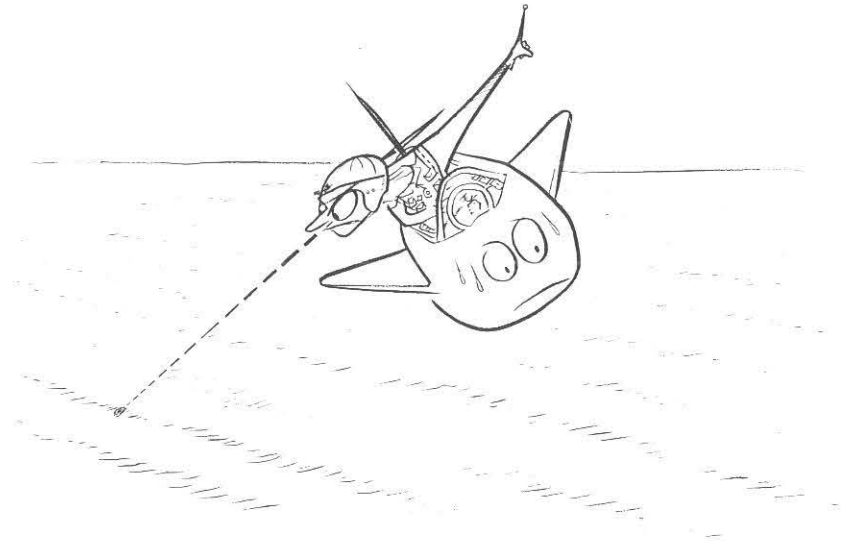


back home. So a good position report is a must. You'll see why if you take a look at the cockpit of a helicopter like the HO₃S. The lack of navigation instruments will amaze you. Observe also that the pilot is necessarily so busy with his hands and feet to keep his machine flying that he cannot possibly do any fancy navigating.

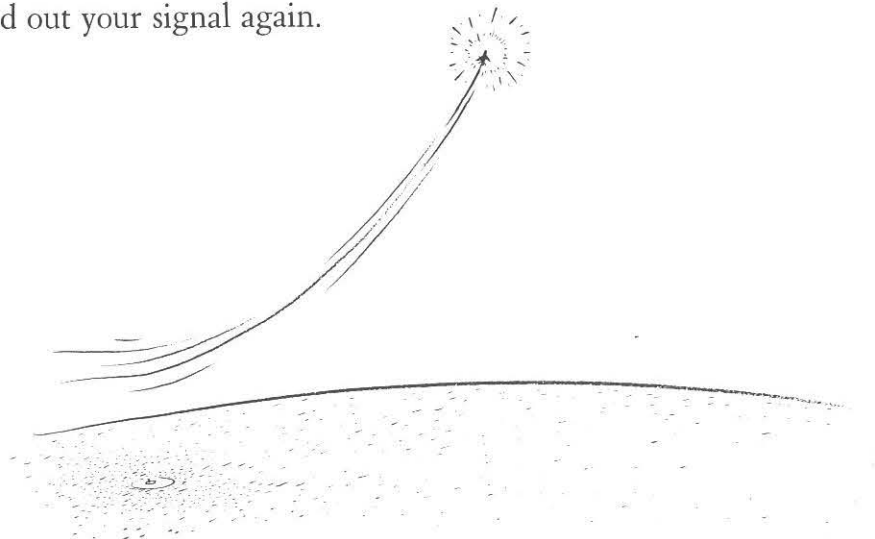
If you suddenly find yourself flying RESCAP, be sure you send in full information about your friend below. Communication procedures will naturally vary from area to area. Usually the senior flight leader present assumes command of the RESCAP and notifies the Task Force Commander. He may, if he has been so directed, request RESCAP from the nearest Tactical Air Direction Center. If the emergency has taken place in high country, the first communication includes the altitude of the downed man, for reasons explained later on.

We've gone into some of the problems of orbiting over unfriendly land areas but there are also certain questions of judgment involved in flying RESCAP over water. In a plane equipped with VHF or UHF radio, you know that your range of communication is limited. At

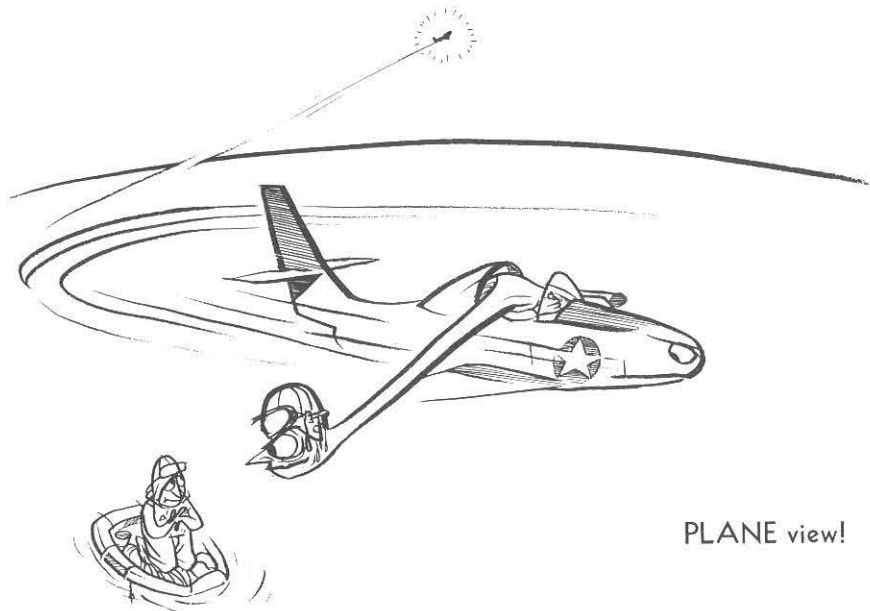
the same time, aware of how difficult it is to keep sight of an object as small as a paraft on a choppy sea, you won't want to go upstairs



where your message has a better chance of getting through. You may not be able to locate the survivor again if you do. The best bet is to keep the man in sight, taking a chance on the radio signal. Later on, if you are forced to leave without being relieved, dump as much dye marker as you have in the area, gain sufficient altitude, and send out your signal again.

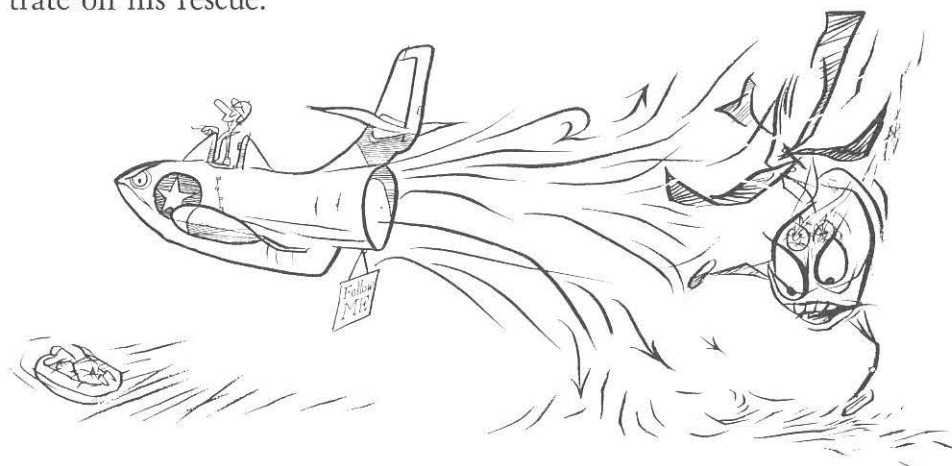


When several aircraft are flying RESCAP, one pilot can go up high for effective transmission. Just be sure that someone is keeping that raft in plain sight.

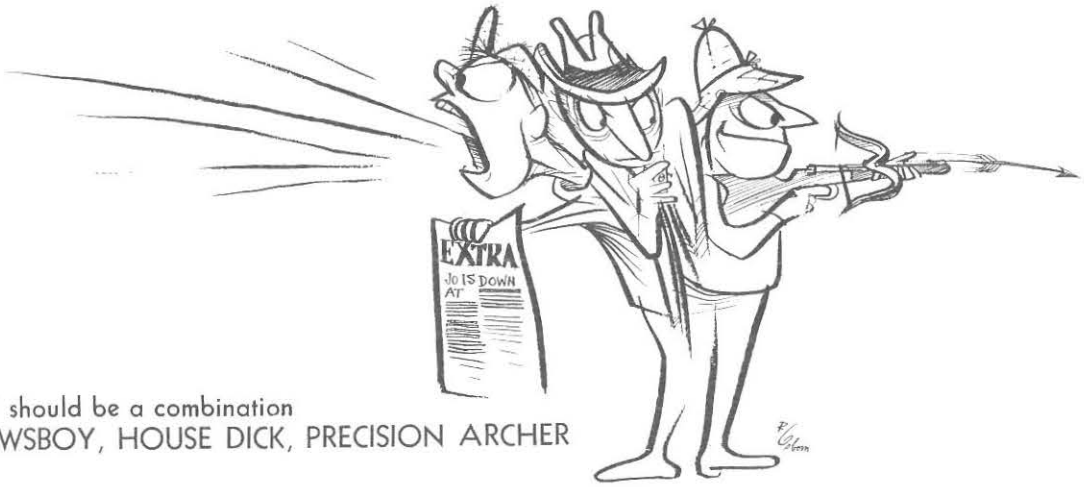


PLANE view!

And when the helicopter appears, give it plenty of air room. Stay away from it whether you are clearing the area or leading the whirly in. Prop wash or disturbed air in the wake of a jet can be very troublesome indeed when the stump jumper is trying to concentrate on his rescue.



Get out the word. Keep the man in sight, varying your tactics according to the area and the unfriendly forces in it. Help the heli-



YOU should be a combination
NEWSBOY, HOUSE DICK, PRECISION ARCHER

copter pilot to pinpoint the man below but stay as far away from the 'copter itself as you possibly can.

A LONG TIME COMING

One of the most important aspects of getting rescued is making up your mind that a little time may elapse. Hence the third of the four easy rules: *prepare for a wait*. Regardless of how ridiculous it may



I'll probably look like
Rip Van Winkle!

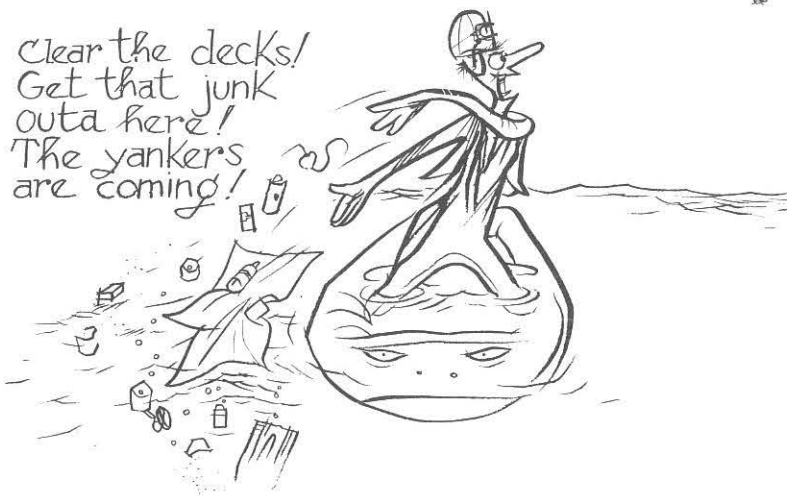
seem at the moment, settle down as if you might have to be there for days. The carrier may be in plain sight, your friends may be orbiting and wagging all kinds of encouragement, you may see a helicopter winging its way toward you—but prepare for a wait anyway.

Because the situation can change in the twinkling of an eye. An enemy sub is spotted. A sudden squall hides you from view. Your friends upstairs are ordered away. The helicopter develops rotor trouble and must turn back.

Improbable? All these things *have* happened.



And where are you if you've dumped your survival kit, jettisoned your smoke flare or otherwise disposed of gear that you are now bitterly sure you need desperately? Up the creek and not a paddle in sight, brother.



This is what the specialists emphasize again and again: never count on a quick rescue.

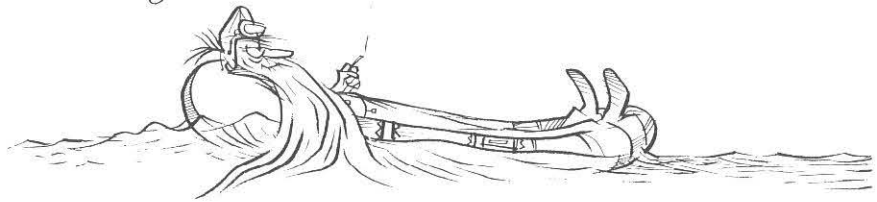
Never. Not when you're down at sea, not when you're down ashore.



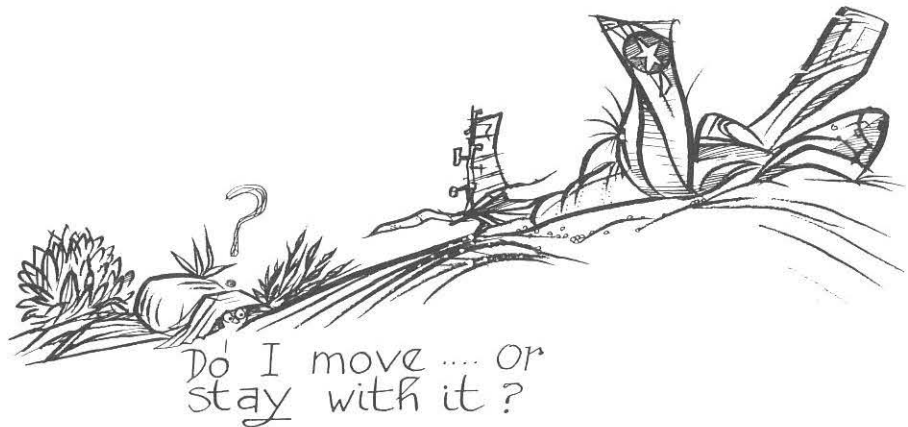
*Never count this
chicken 'till he's
caughted!*

The rescue detail will do everything in its power to bring you safely home as soon as possible. Count on that. But prepare for the wait anyway.

Long time no see!



While you're waiting, run over the briefing you've had on escape and evasion. Reason out your situation. Nine times out of ten it's

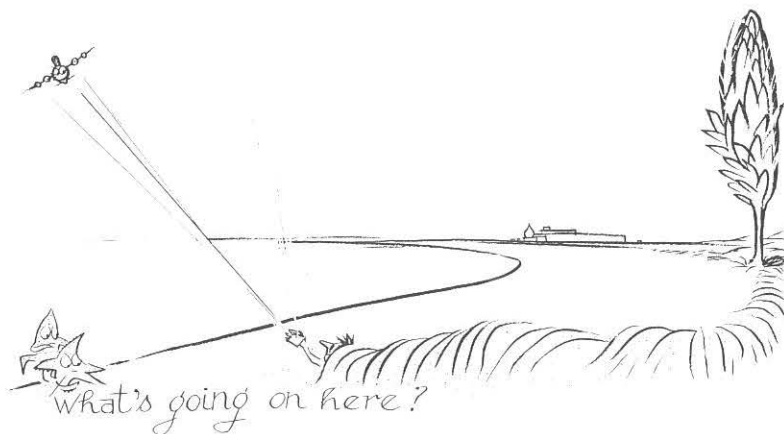


*Do I move or
stay with it?*

better to stay in the vicinity of the crashed plane because that is the object the rescuers are most likely to spot from the air. But you must figure, too, in enemy territory, that the same crashed plane is the first object the foe will investigate. Think before you throw away any article from your survival kit. You can't always be sure of just what will come in handy.

Keep a close eye on your physical condition. If you find it desirable to make tracks away from the scene of the crash, your best bet is to make haste slowly, taking care not to wear yourself out in frantic flight over rough terrain. A mile a day made by a fellow who takes reasonable precautions is better than 20 miles made by a man who attracts so much attention the enemy tracks him down the second day. Or who moves so fast that he exhausts his strength too soon. In general, the best formula for moving through enemy territory is to do your traveling in easy stages, bringing along as much survival gear as you can but not weighing yourself down unduly.

Creeks and streams lead to rivers. Rivers lead to the sea. The sea is where our forces are likely to be in charge; so that's the place to head for. But don't forget that settlements are usually located where rivers run into the ocean and these places may be under enemy control. Circle around settlements and try to find your way to a section of deserted beach. Sooner or later our people will fly over and you'll want to be ready with whatever signalling device you have managed to keep with you—mirror, smoke flare, or whatever. The safest



device is the mirror. It can be spotted only from the sky but the smoke flare, used prematurely, may be a dead giveaway of your location to the enemy on the ground.

But these are matters covered very fully in your safety and survival briefings. The point here is a simple one: if you go down, never assume you will be rescued within the next 5 or 10 minutes. Always prepare for the worst. Get your mind and equipment in order for the long wait. Hang on to what you can of your survival gear and make haste slowly. Bear in mind that in tests conducted by the RAF of their people's capacity to live off the land and make their way to friendly territory, the best record of all was made by two elderly noncommissioned officers, just about ready to retire. Forced to favor their hearts and bunions, these two venerable men simply took it very easy along the way. When the results were added up, they were found to be in much better condition than any of the younger men who had been through the same ordeal.

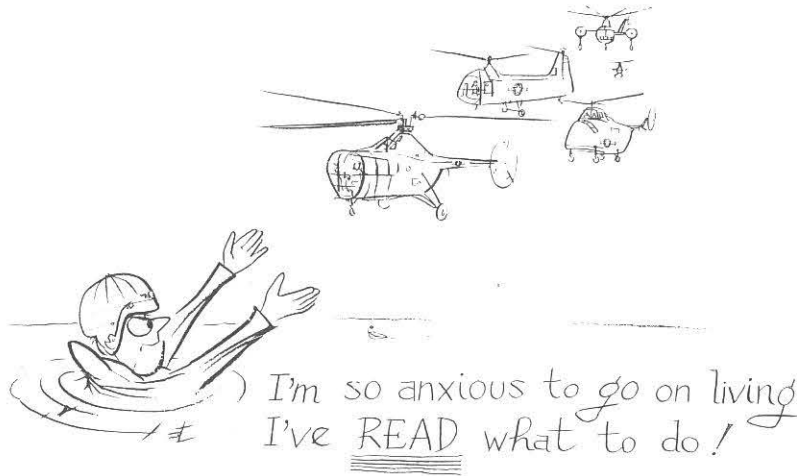


Anticipate, communicate, prepare for a wait . . . and . . .

COOPERATE

Of course you'll want to give every assistance to the people risking their necks to save your neck. If cooperation were merely a matter

of good intentions, it would be pointless to mention it at all. The fact is, cooperation with the rescue people is based on knowledge. You must know enough of the procedures they follow to be able to lend them a hand. As far as helicopters are concerned, this is mostly a matter of knowing the capabilities and limitations of the machines themselves.



One of the best ways to get the word is through talking with the stump jumpers themselves. You'll find these earnest, hard-working pilots just as interested in doing their jobs well as any of the "fixed wing" crowd. After all, a successful rescue mission is as important to them as the mission of any kind of pilot. The difference is that usually *several* lives are at stake whenever one of the whirlies sets out on an errand. If you're attached to the Fleet, there's bound to be a helicopter unit around. Go visit.



The lads will tell you that they make their rescues in three ways, suiting the method to the circumstances:

1. *Running.* The survivor grabs the sling hanging below the 'copter as it flies by. Like leaping aboard Papa's old Model-A as it chugs by, this method has its risks but it may be necessary at times.
2. *Hovering.* The survivor gets in the sling and is hoisted into the hovering helicopter. This is the usual method. When needed, a crew member may be lowered to help the survivor.
3. *Landing.* In special cases—when there are wounded survivors, for example—the 'copter may land in small clearings. This is *not* unusual. The whirlybird will not land unless there is no other way to do the job.

As a survivor, *you* must decide where to be and what to do on the basis of the probable method of rescue in your particular situation.



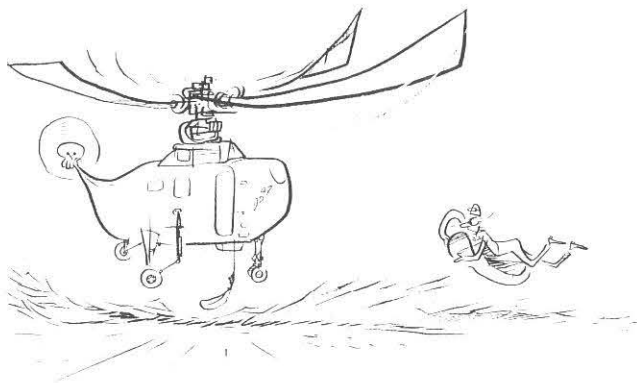
YOU must decide!

WHIRLIES OVER WATER



Let's assume you have made a successful ditching, inflated your raft, and are hopefully awaiting developments. There you are, a free floater, and the helicopter wings its way toward you.

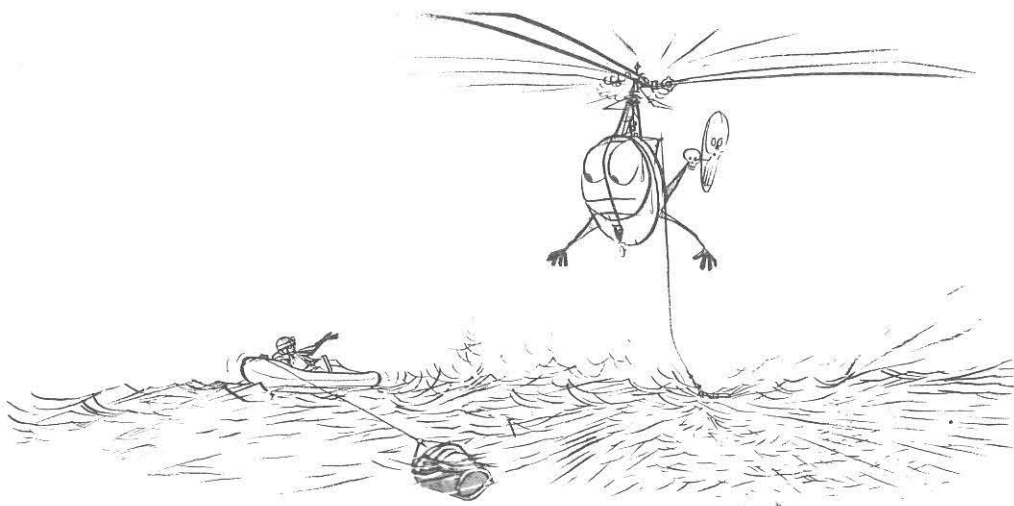
Knowing what just a little surface wind will do to a liferaft, you can easily imagine the effect of the downwash from the rotor blades on your position below the 'copter. You and your raft will be blasted from hither to yon. The whirly pilot will hover, the raft will move away, and you won't be able to reach the sling.



What you do then depends largely on your physical condition. If you're strong enough, your best bet is to abandon ship, to leave the raft and take to the water. Then the 'copter pilot can hover a few

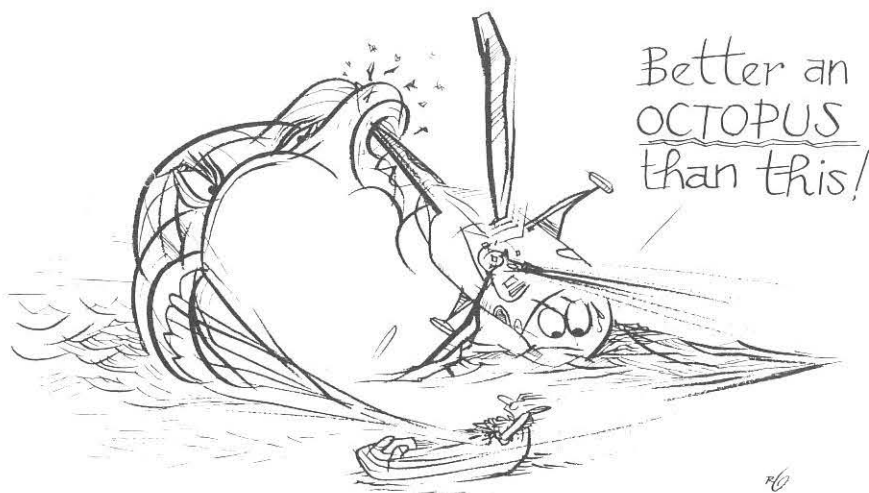


feet above you, lower the sling, and have you pulled out of there in jig time. However, an injured or exhausted man may have to stay with his raft. The best way for him to cooperate is to throw out the sea anchor so that the raft will not scoot around so fast. The closer



to one place that the raft remains, the better the chance for a successful hover.

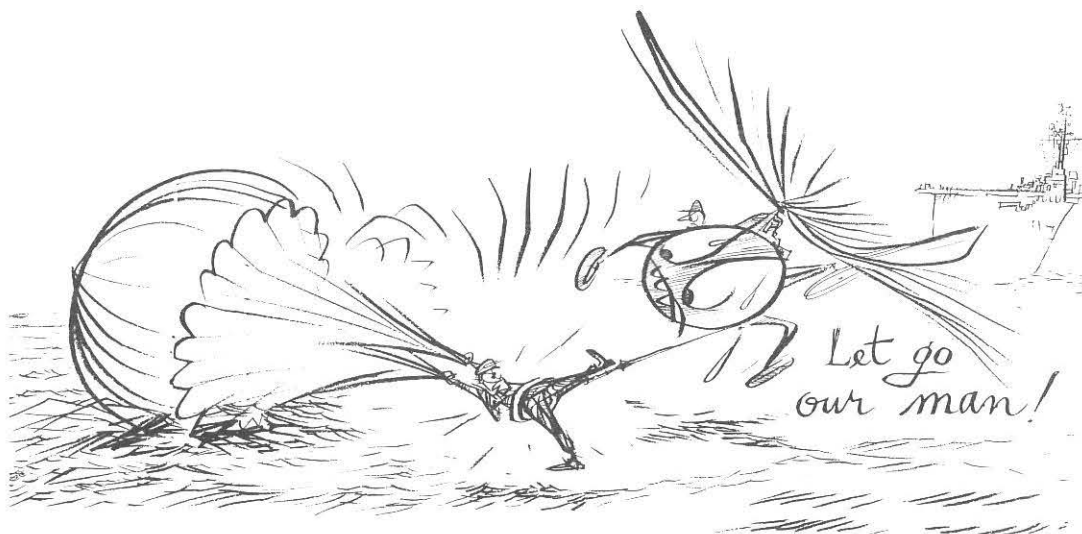
Watch your parachute. It can blow too. If it's open, the downwash from the main rotor will billow the 'chute and may cause it to foul the tail rotor of the helicopter. When that happens, maybe



nobody gets rescued, including the new arrivals in the drink. The parachute is also heavy. Even unopened, it can cause trouble because it may mean a critical weight difference. The whirlybird pilot can't tell, from his position, whether or not it's still attached to you. If he hoists you a few feet out of the water and realizes you are too heavy, all he can do is

1. drop you or
2. join you.

This close to being rescued, you can afford to lighten your load. Get rid of the 'chute before you reach for the sling.



So there are the first three ways to cooperate at sea. Make yourself as stationary a target as you can. See that your opened 'chute is out of harm's way and in no danger of fouling the 'copter rotors. Slip out of the 'chute harness before being hoisted so that the lifting strain on the whirly is minimized.

Now we'll assume you're in the water, well clear of 'chute and raft, and the sling is lowered for you. How do you get into the sling?

There's only one approved method.

PLACE THE SLING OVER YOUR HEAD,



BEHIND YOUR BACK, AND UNDER YOUR ARMPITS.



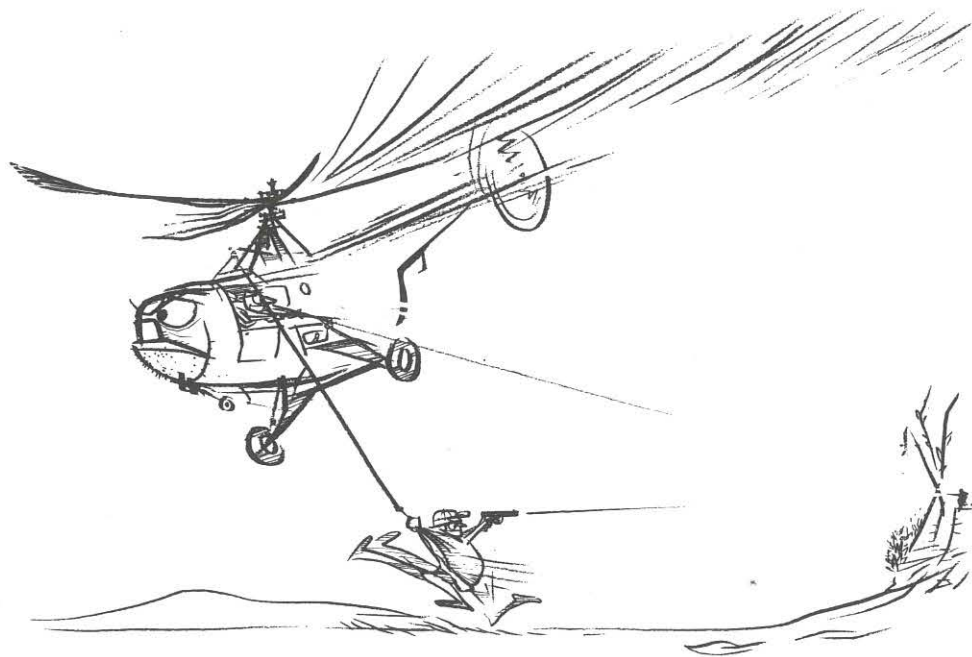
KEEP YOUR ELBOWS CLOSE TO THE BODY AND HOLD ON.



That way, obviously, your own weight helps to hold you in the sling. If there's a chest strap, fasten that too.

When the sling seems too small, the chances are there's too much air in your Mae West. Deflate Mae until you fit. Note also that during the winter months the added bulk of heavy flight gear may force you to squirm a little to get into the sling. You can do it. Keep trying until you are safely surrounded.

The whirlybird pilot may have to make a running rescue at sea. If you are being chased and the enemy is lobbing bullets all around, the best way for you to be hauled out of there is any way that's quick. The bullet-dodging 'copter pilot will be in no mood to hover. What he will probably do is to lower the sling, make a run on you, and trust that you will grab and hang on as best you can. Then, after



you have been hauled to less crowded territory, he'll go into his hovering routine, allowing you time to slip into the sling in regulation fashion. The main purpose will have been accomplished—to lift you and everybody else out of harm's way.

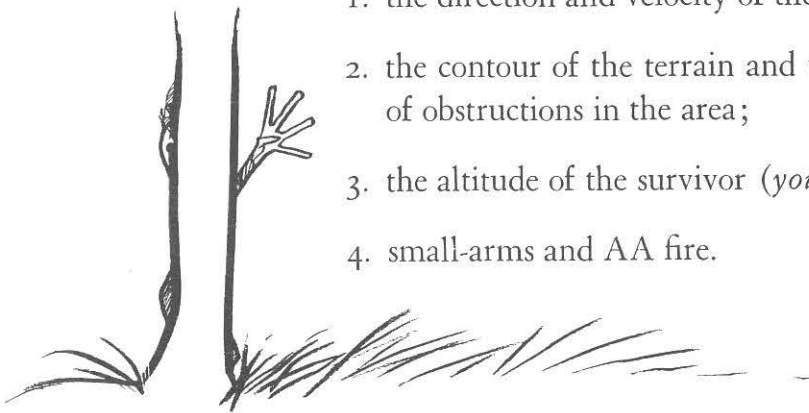
Sea rescues, then, are not too complicated. It's on land, especially in enemy territory, that your finest cooperative efforts are called for.

THE FOUR FATEFUL FACTORS

In spite of the cheery articles in the slick magazines, helicopters *do* have limitations. They can't hover over a gnat's back on a mountain peak or beat their way down a mine shaft looking for you. Not that most whirlybird pilots wouldn't try to make them do those things if a life were at stake, but the chances of success would be dim. If, as the man in trouble whose rescue depends on a helicopter, you know what the machine can reasonably be expected to accomplish for you, the life-saving mission is more likely to be carried out.

A whirlybird pilot coming in to get you over the land must always bear in mind four special factors in addition to his normal problem of flying with head, hands and feet. They are:

1. the direction and velocity of the wind;
2. the contour of the terrain and the number and kinds of obstructions in the area;
3. the altitude of the survivor (*you*);
4. small-arms and AA fire.



Whatever help you can give him in determining or overcoming any of the four factors will make his job simpler. This comes under the heading of cooperation.

One good way for you to indicate wind direction for the pilot is to light off your smoke flare when you see the 'copter approaching. This has the added benefit of helping to spot you. Remember that with the helicopter's limited fuel supply and the possible presence of the enemy, time is very important. Work fast but use your judgment too. If you light the smoke flare too soon—when the helicopter is still fairly far off—you may give the enemy time to reach you first.

Old hands say that in unfriendly territory the best procedure is to show smoke at the last possible moment.



Without a smoke flare, you must improvise. Throw dirt, dried leaves, grass, or anything else into the air and continue to do so until the whirlybird pilot spots you. If the wind is strong enough, hold up



your scarf or other piece of cloth. When the ground is frozen and you have no other means of making like a human windsock, turn your back into whatever wind there is and swing your arms vertically along the side of your body to indicate the wind line. The idea is to help the pilot as much as you can. This is no time to stand around and pick your teeth.

STAND CLEAR

Most people think of helicopter rescues only in terms of “hover and hoist.” It’s certainly the easiest way. But a man in need must also consider *where* the ‘copter can hover and how *far* it can hoist.

The cable on the helicopter hoist is only seventy-five feet long. If you are surrounded by trees, buildings, telephone poles or other objects that stick a good way up into the air, the cable may not be long enough to reach you. Then, with the added weight, the whirly-bird pilot will need forward as well as upward motion to get going. So, even if you can catch the sling, the ‘copter may not be able to lift you clear of the surrounding obstructions. It would be a shame for anybody to be this close to salvation and find himself splattered against the side of a barn.

Always make for an open area. Try to be in the clear.

In mountainous country—where, for reasons explained later, the running pickup is usually necessary—you must not only find an open area but must try to allow enough “up-wind” clear space for you to avoid any obstructions while being hoisted on the run. Don’t be at the bottom of a ravine waiting for a ‘copter to come. It can’t.



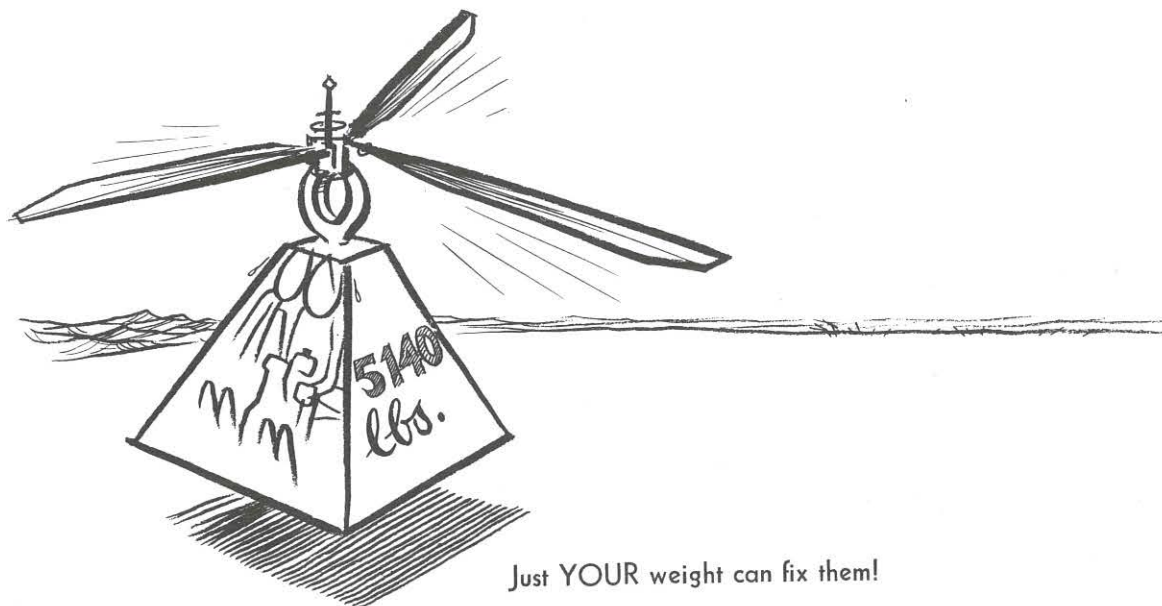
In other words, a very important part of rescue cooperation is for you to try to pick a good spot for the life-saving.

Consider certain aspects of the helicopter. If you think the weight factor is critical in your own aircraft, give a thought to what the average HO₃S pilot has to contend with. To begin with, the *maximum* operating weight of the HO₃S is only 5,300 pounds. The weight margin the pilot has to work with is very slim. Here's why.

Empty, the HO ₃ S weighs about	4,150 pounds.
The 100 gallon gas load comes to	600 pounds.
An average pilot weighs	160 pounds.
The crewman tips the scales at	160 pounds.
And the rescue gear adds up to	<u>70 pounds.</u>

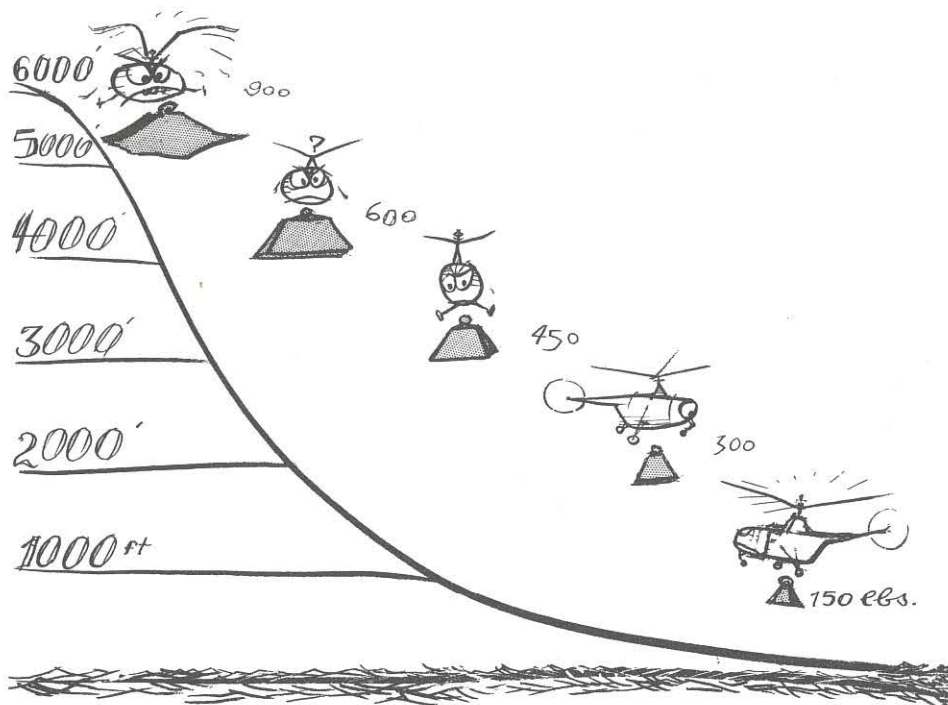
Thus, the total operating weight at takeoff is about 5,140 pounds.

It takes no expert to figure that the whirlybird pilot, with a full gas load, goes into the air with an approximate operating margin of *only 160 pounds*. Of course the longer the HO₃S is up there, the greater the operating margin as the fuel weight goes down.



Just YOUR weight can fix them!

Suppose the whirlybird pilot sets out on a rescue mission that takes him into high country. He knows at the start that the higher he goes, the more trouble he is going to have touching down safely and getting off the ground again. In fact, for every 1,000 feet of altitude, the gross weight of the HO₃S must be reduced by 150 pounds in order to make a safe landing. That's the rule-of-thumb used in the stump-jumping business.

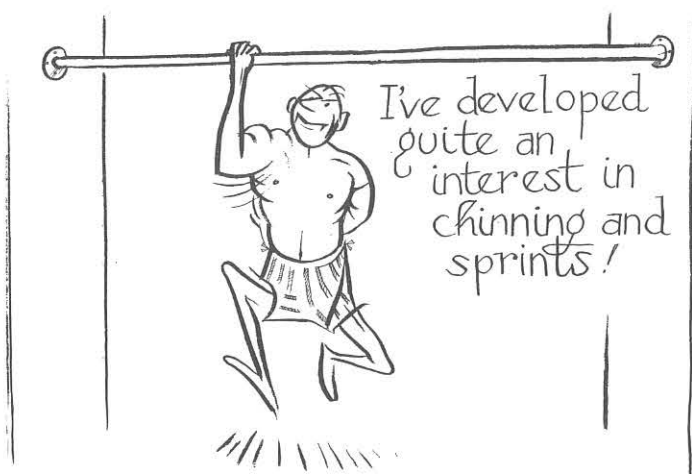


Now, even without any gasoline at all, the *total* operating margin of his HO₃S is only about 760 pounds—but for his sake and yours, he's got some fuel in there to twirl his rotors.

You are the man to be rescued and you are at 6,000 feet. As the whirlybird pilot approaches, he runs through his quick, rule-of-thumb calculation, multiplying his 150 pounds (for every 1,000 feet) by 6. The result is 900 pounds. Not being Dilbert, the 'copter pilot realizes that he cannot hover or touch the ground up there. Not even if he had no fuel weight to consider.

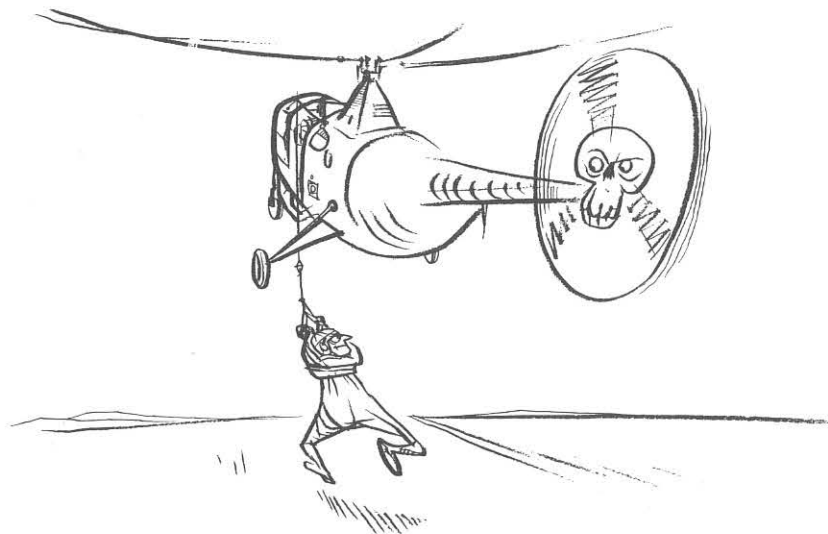
He *must* make a running pickup.

What he hopes is that you know it too, that you are poised in an open area like a sprinter, ready to grab as you go. Hanging on under those circumstances is not the easiest stunt in the world but many people have done it. If you can hang on long enough to be hoisted or even for the pilot to descend to a safe place at lower altitude, you're among the saved. Otherwise, you're still at 6,000 feet, wondering



who spread all the propaganda about the wonderful qualities of helicopters.

Up high, then, prepare for the running pickup. Be sure you are in the clear. And under all circumstances, watch out for that tail rotor. It is just about at the right height to cut off practically anybody's head. Keep a respectful eye on it. The tail rotor is located

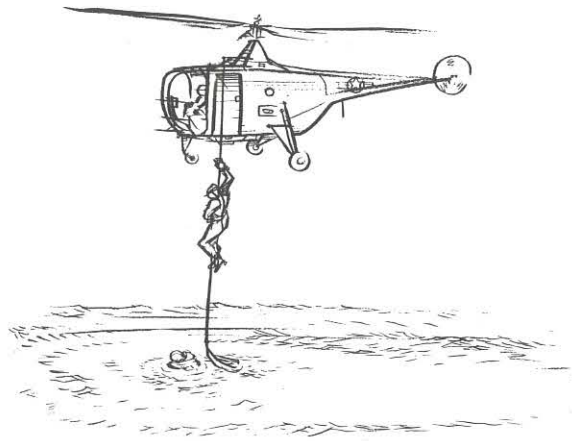


a considerable distance aft of the landing gear and only a slight left or right movement of the forward section of the HO₃S magnifies its sweep.

At high altitudes, the helicopter cannot hover and hoist. It must have more speed to keep from settling to the ground. But if you have chosen your spot with care, if you have allowed enough up-wind, obstruction-free area along the 'copter's flight path you can be pulled out on the run. Nothing is impossible in the rescue business. During one running pick-up, a downed pilot shot two enemy soldiers as he ran for the sling and picked off another while he was being hoisted.

LET'S FACE IT

There are times when the downed man is not up to helping out very much. Not every pilot is lucky enough to come through a bail-out, crash or ditching without some kind of injury. So he may not be able to run and grab. He may need help to get into the sling. The helicopter rescue people have handled such cases too. During cold weather operations, for example, the crewman was lowered into the water to assist an injured pilot into the sling. What's more, he stayed



there in the drink until the 'copter pilot could return for him after disembarking the injured man aboard ship. In another instance, both crewman and pilot have left the 'copter to carry a downed pilot to

the plane when he was unable to move under his own power. A helicopter also landed in a small ravine where the crewman shot it out with the enemy until the slightly injured rescuee painfully scrambled aboard.

Circumstances alter cases, naturally. The rescue people can suit their rescue tactics to the situation of the man about to be saved. It helps to know beforehand, if that is possible. A word from the RESCAP crew, detailing the condition of the man in need of saving, can spell a crucial difference. The 'copter pilot and his crewman will be set for special circumstances.

HELP YOURSELF

Rescue techniques and devices are being developed daily. No matter how good they get, though, their effectiveness will always depend in part on *your*

anticipation



communication



preparation and



cooperation.



If you find yourself or your buddy in a tight place, your knowledge of life-saving gear, getting out the word, saving what you can, and the operating qualities of the helicopters is as important as any other aspect of rescue.

Read over the helpful books and pamphlets. Be sure you know the proper way to tell the world about your troubles. Always be prepared to wait. Hang on to the emergency equipment you know you'll need. Talk to the helicopter pilots about their ways of operating. Be set to help out the fellow who is risking his own neck to help you.



